Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
AMENDMENT OF PARTS 73 AND 74 OF THE COMMISSION'S RULES TO PERMIT CERTAIN MINOR CHANGES IN BROADCAST FACILITIES WITHOUT A CONSTRUCTION PERMIT	)	MM Docket 96-58

To: The Commission

COMMENTS OF CRAWFORD BROADCASTING COMPANY

Transmitted herewith on behalf of Crawford Broadcasting Company are comments to the above-referenced rule making proceeding.

Respectfully Submitted,

CRAWFORD BROADCASTING COMPANY

By _____
John S. Neely
Its Attorney

May 16, 1996

Miller & Miller, P.C.
P.O. Box 33003
Washington, DC 20033

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Amendment of Parts 73 and 74	)	
of the Commission's Rules To	)	MM Docket No. 96-58
Permit Certain Minor Changes in Broadcast	)	
Facilities Without a Construction Permit	)	

Comments of Crawford Broadcasting Company

The following comments are filed by Crawford Broadcasting Company ("Crawford") in response to the Commission's Notice of Proposed Rulemaking in In re: Amendment of Parts 73 and 74 of the Commission's Rules to Permit Certain Minor Changes in Broadcast Facilities Without a Construction Permit ("Notice"). Crawford and its affiliates are licensees of eighteen radio broadcast stations.

A. Comments on Increases in Effective Radiated Power (ERP) for Non-Grandfathered and Non-Contour Protection FM Commercial Stations.

The FM spacings contained in 47 C.F.R. §73.207 are based upon the maximum facilities for each class of station as defined in 47 C.F.R. §73.211. Likewise, the contour protection rules contained in 47 C.F.R. §73.215 specify that contours of stations to be protected are based upon the presumed use of the maximum ERP for the applicable station class (as specified in §73.211) and the antenna HAATs in the directions of concern that would result from a non-directional antenna mounted at a standard eight-radial antenna HAAT equal to the reference HAAT for the applicable station class. In the Notice, the Commission proposes to allow stations that are not grandfathered and not operating under the contour protection provisions of 47 C.F.R. §73.215 (fully spaced) to permanently increase their ERP up to the maximum permitted for the station class by filing an FCC Form 302-FM modification-of-license application, eliminating the need to first file and await review and grant of a Construction Permit application[1]. Crawford supports this proposal, as it would give licensees much greater latitude to improve their facilities up to the maximum for the station class without the burden of the Construction Permit application process, engineering and filing fee costs and several months of processing time.

Elsewhere in the Notice, the Commission proposes to allow changes in antenna radiation center height of up to two meters above or four meters below the authorized value without the need to

[1] Notice at 5.

go through the Construction Permit application process[2]. While Crawford supports the greater latitude in antenna mounting considerations afforded by this proposal, we believe that it does not go far enough. The distance to an FM station's coverage contours is a function of both the effective radiated power and the antenna height above average terrain. To allow a station to increase its power up to the maximum for its class by only filing a modification-of-license application will, in many instances, allow stations to increase the distance to their contours to only a fraction of the radius provided for in 47 C.F.R. §74.207 if they cannot increase, at the same time, the height of their antenna center of radiation.

Many stations are in situations with their antennas mounted at intermediate elevations on tall towers and could, if space were available, move their antennas to a higher location on the same tower. Restricting the vertical latitude within which a station can move its center of radiation without the need for a Construction Permit would not allow stations to take advantage of tower space which may be or become available.

In other instances, stations may find that their antenna mounting locations are either coincident with guy wire attachment points or below but sufficiently close to such guy wire attachment points that the guy wires are in the aperture of the antenna, distorting the radiation pattern and causing other adverse effects. The two-meters-up/four-meters-down provision in the Notice would, to a degree, allow stations to compensate for this, but in many instances, more than the vertical latitude proposed would be needed to relocate their antennas clear of obstructions.

While we agree that any change in supporting structure height or transmitter site location should require a station to file a Construction Permit application, Crawford believes that the Commission should allow stations to make changes in antenna height as space on the existing antenna supporting structure is available, without the need for a Construction Permit. This should also permit a station to situate its antenna center of radiation above the maximum for the class of the station as long as a corresponding reduction in ERP is incorporated into the change. The Commission could, in the license modification application review process, easily verify that the new ERP is at or below the value that would, along with the new HAAT, produce a contour distance less than the specified class contour distance. If necessary, the Commission could then notify the licensee of any required change or reduction in ERP based upon its calculations.

In the case of a reduction of ERP or HAAT that would result in a decrease in coverage, the Commission should permit the change by requiring only a modification-of-license application, requiring a showing that demonstrates that the principal community coverage requirements will be met by the resulting new facilities.

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[2] Notice at 17.

B. Comments on Program Test Operation for FM Stations with Directional Antennas

In the Notice, the Commission has proposed to allow stations that have constructed facilities employing a directional antenna to receive automatic Program Test Authority at reduced power during the time that the license application is being reviewed by the Commission[3]. Crawford has found itself in the difficult situation of having replaced the existing non-directional antenna with a directional antenna and, while the modification-of-license application is being reviewed, being off the air without program test authority for the new facilities. Only a waiver of 47 C.F.R. §73.1620(a)(2) by the then-chief of the Mass Media Bureau saved the station from a lengthy outage which would have been financially devastating[4].

Crawford supports the proposal to allow automatic Program Test Authority for FM stations employing a directional antenna We do not, however, feel that the proposed ERP reduction to either half power or the authorized ERP corresponding to the deepest null of the directional pattern, whichever is greater, is reasonable and necessary to protect neighboring stations from interference pending Commission review of the license application and accompanying directional antenna proof-of-performance data. We believe that the surveyor's and supervising engineer's certifications are sufficient to insure the directional antenna has been installed in accordance with the manufacturer's instructions and with the proper orientation. The Commission could easily incorporate a requirement into directional facility Construction Permit requirements or 47 C.F.R. §73.1620(a)(2) that would authorize automatic Program Test Authority only if both these certifications have been made and the measured directional pattern meets all the Construction Permit requirements as well as all the requirements of 47 C.F.R. §73.316(b). Any resulting interference would be minimal, so much so that the 3 dB ERP reduction proposed in the Notice would have little effect. Crawford believes that a two-step Program Test Authority process for FM stations employing a directional antenna would be burdensome and unnecessary. The same results could be achieved by allowing one-step automatic Program Test Authority for these stations in the same manner as for non-directional stations, with the requirements noted above incorporated.

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[3] Notice at 9.

[4] See *Telegram to Dontron, Inc.*, BPH-860221ID, Reference No. 8920-HVT, dated December 15, 1986.

C. Comments on Changes in Rules Relating to FM Directional Antennas

The Commission proposes in the Notice to codify the staff's present policy that the area within the composite pattern (in relative field values) of a measured directional antenna to be at least 85% of the area within the authorized composite pattern[5]. One objective of this proposal, as stated in the Notice, is to conform the FM broadcast service to the AM service in this regard.

Crawford supports the Commission's endeavors to codify its policies, as this makes clear the Commission's expectations, which are often obscure and buried in policies that may or may not be readily available to the average broadcaster. We do not, however, agree that the policy as indicated in the Notice reflects the actual policy of the Commission as it has existed as far back as memory serves, nor do we believe that this stated policy conforms to Commission rules in the AM service.

In 47 C.F.R. §73.151(a), it is stated that a "showing must be submitted to establish for each mode of directional operation, that the effective measured field strength (RMS) at 1 km is not less than 85% of the effective field strength specified for the standard radiation pattern for that mode of directional operation..." We note that it is the RMS of the measured pattern that must be equal to or greater than 85% of the RMS of the standard (authorized) pattern.

In past dealings with the Commission staff with regard to FM directional patterns, discussions have always reflected that the RMS of the measured composite relative field pattern must not be less than 85% of the RMS of the authorized composite relative field pattern. There was never any mention that the coverage area of the measured pattern must not be less than 85% of the area of the authorized pattern. This is significant in that the area within a relative field pattern varies in relation to the square of its RMS. As a result, a lower limit of 85% in area corresponds to a 92.2% limit in RMS. This 92.2% lower limit for RMS will, in many cases, be difficult to produce in practice. Significantly increased time in pattern development on the antenna range as well as added antenna complexity in the form of a greater number of parasitic elements and the like will result in needless cost increase to the broadcaster.

The only way that we can see to insure that this excessively high threshold can be met is to have the pattern fully developed prior to the submission of the Construction Permit application. This would insure that the measured pattern would be identical to the "proposed" pattern, but in doing so, the broadcaster runs the risk of the Commission finding a deficiency or defect in the application that would require the measurements to be repeated. This could result in thousands of dollars in additional pattern development cost and much wasted time.

[5] Notice at 25.

A policy requiring that the measured RMS of a pattern must be within 85% of the authorized pattern is reasonable and not overly burdensome. Antenna manufacturers are keyed to this policy and set the 85% RMS as the lower limit in pattern development on their test ranges. Since we know that 85% of the RMS corresponds to 72.25% of the maximum radiated power of a particular antenna, we can compare the maximum-facility non-directional 1 mV/m coverage areas of all the different classes of FM stations to the maximum HAAT/72.25% maximum ERP 1 mV/m coverage areas of all the classes of FM stations. We have undertaken a simple study to do this, and we find that the worst case shows that a non-directional Class A FM station operating with 72.25% of its maximum ERP (4.335 kW) and its maximum class height of 100 meters AAT will produce a 1 mV/m coverage area of 86.4% of the 1 mV/m coverage area of the same station operating with the maximum facilities for that class of station (6 kW ERP at 100 meters AAT). All the other classes of stations studied show higher percentages of area covered using 72.25% of the maximum ERP at the class-maximum height, with the highest percentage being 92.9% for a Class C FM station. In light of the results of this study, it is clear that a policy or rule requiring the RMS of the measured pattern to be within 85% of the RMS of the authorized pattern would insure that the predicted 1 mV/m coverage area of the measured pattern would be within 85% of the predicted 1 mV/m coverage area of the authorized pattern.

In consideration of the Commission's longstanding policy, the ease with which the 85% RMS rule can be implemented, the difficulty which would result from an 85% area rule, the coverage area that would result from an 85% RMS rule and the stated goal of conformity to the corresponding AM rule, Crawford supports a rule which requires that the RMS of the measured pattern must be within 85% of the RMS of the authorized pattern.

Elsewhere in the Notice, the Commission proposes to allow stations employing directional antennas to replace one directional antenna with another without a Construction Permit, provided that the measured composite pattern of the new directional antenna is completely encompassed by the authorized composite pattern of the existing antenna in all azimuths[6]. The licensee would be required to file a modification-of-license application and include therewith all the directional antenna exhibits which would normally be specified as conditions on a Construction Permit for a directional facility.

Crawford supports this proposal, but believes that the Commission must recognize that a directional composite pattern that is completely encompassed by an existing composite pattern will, by definition, exhibit a lower RMS than the pattern which it replaces. The resulting measured RMS could, then, be forced below 85% of the authorized RMS in order to comply with the proposed total-encompassment rule. Some latitude should be allowed in this area. We suggest that the measured composite pattern of a replacement antenna be allowed to be as low as 80% of the authorized

[6] Notice at 11.

directional composite pattern in order to aid antenna manufacturers and broadcasters in meeting the aforementioned complete encompassment requirement of the proposed rule change.

D. Comments on Use of Formerly Licensed Main Facilities as Auxiliary Facilities

Quite often, when a station upgrades its main facilities to a higher ERP, HAAT or combination of both, the formerly licensed main facilities are left intact. These facilities are useful as auxiliary facilities, permitting tuning, testing, and maintenance on the main facilities as well as permitting tower workers to safely work near the main antenna. Under current Commission rules (47 C.F.R. §73.1675), such facilities can only be used under these circumstances if licensed as auxiliary facilities. Under the present rules, it is possible to license formerly licensed main facilities as auxiliary facilities, but only after following the two-step process of obtaining a Construction Permit, then filing a license application. Since there is, under these circumstances, nothing to construct, the Construction Permit application is burdensome and unnecessary. All that is necessary is a showing that demonstrates that the service contour of the auxiliary operation does not exceed that of the main facility.

The Commission proposed in the Notice to allow formerly licensed main facilities to be licensed as auxiliary facilities in a one-step process involving only a license application and a service contour showing[7]. Crawford supports this proposal and encourages the Commission to institute processing procedures that will "fast-track" such applications. This will insure that such applications will have minimal impact on Commission resources while expediting grant of auxiliary facility licenses. A simple check of the coordinates, HAAT, ERP and service contour distances against the data already in the Commission's files for the formerly licensed facility would provide a go/no-go decision without complex processing involving numerous departments and reviews, as is the case with current processing procedures.

E. Comments on Continuation of Protection to AM Stations

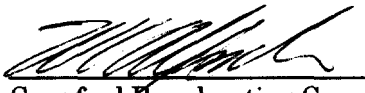
Crawford has the unpleasant experience of finding a cellular tower erected very close by in the main lobe of one of its AM directional arrays without the benefit of prior notification or before and after partial directional proof of performance measurements. The resulting burden of proving that the cellular antenna support structure had not altered our AM station's directional patterns was upon the cellular licensee, but without the benefit of before-construction measurements, it was impossible to fully assess the structure's impact.

[7] Notice at 13.

The Commission has addressed the need to protect AM antenna systems from the effects of nearby antenna structures in the absence of Construction Permits in the Notice[8]. Because any new tower construction or modification of existing antenna supporting structures addressed in the Notice would still require a Construction Permit, the need to protect AM antenna systems from facility changes not covered by a Construction Permit would seem to be unnecessary. Crawford applauds, however, the Commission's proposal to incorporate the AM station protection requirements into a new rule section (47 C.F.R. §73.1692) and revise 47 C.F.R. §73.1690 to direct the applicants attention to these requirements. We feel, however, that broader protections are needed.

Because of their (usually) low heights, the threat to AM antenna systems by cellular towers quite often is not nearly so great as that of other towers. Last year, the Commission took action to codify policy that require Public Mobile Service licensees, specifically cellular and paging system operators, to correct any interference that new or modified towers cause to AM antenna systems. With the current policy and proposed rules requiring other broadcasters to protect AM antennas, the threat to AM antennas from these two fronts would seem to be alleviated. There are, however, many other communications towers in many different services that still pose a significant threat to AM antennas. A 300-foot guyed communications tower proximate to a high-radiation area of an AM antenna or array has a tremendous potential for reradiation, possibly adding, in effect, another element to the AM station's array — one that is beyond the broadcaster's control. Crawford encourages the Commission to adopt rules requiring all licensees in all services over which the Commission has regulatory authority to protect AM antennas from the adverse affects of nearby antenna supporting structures.

Respectfully submitted,



Crawford Broadcasting Company
W.C. Alexander
Director of Engineering

May 15, 1996

[8] Notice at 23.